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Reply Comments on NRSC-5 Standard

Docket No. MM 99-325

My name is Jack Taylor and I worked in the radio broadcasting industry doing sales, programming, and some engineering from 1985 to 1997. I attended every NAB show from 1988 to 1996. Right now my only connection to radio broadcasting is as a listener. I am submitting these reply comments in response to the numerous comments against IBOC digital radio, and particularly those against IBOC digital radio in the AM band. I believe it is important for everyone to understand why the radio industry is where it is, and also how it got here.

As those more experienced people among us know, the old adage that "money talks" applies to most human activities. Politicians pay the most attention to their biggest campaign contributors, the Supreme Court says that local governments may take away peoples' homes for no reason other than to give them to wealthier people who will build more expensive buildings that will result in higher property taxes, and the National Association of Broadcasters pays more attention to wealthy radio broadcasters who pay larger dues than it does to others. This is simply the way the world works.

It may be true that IBOC digital radio will destroy the AM broadcast band. However, AM broadcasters' fates were sealed long ago and it's much too late now to do anything but hope for the best. How did we get here? Let's review the history.

In 1990 several companies petitioned the FCC to allocate new spectrum for digital radio broadcasting. These petitions envisioned digital broadcasting futures that included satellite and terrestrial transmitters. The National Association of Broadcasters recognized the tremendous impact that any of these proposals, if adopted, would have on its members and began to work with Eureka 147, a developer of digital radio broadcasting systems, to ensure that NAB members would be included in the transition to digital. NAB provided live demonstrations of the Eureka 147 system at its 1991 convention, and published a 21 page pamphlet that addressed many broadcaster questions about DAB. Unfortunately for AM broadcasters everywhere money does in fact talk, and NAB's wealthiest members soon rose up in revolt in response to these NAB actions. The result was a disaster for AM and FM radio, and in the end will likely prove to be the watershed event that led to the industry's undoing, for it was this wealthy broadcaster revolt that will likely end up leading to AM/FM broadcasters' loss of their most prized possession – guaranteed installation of receivers for their broadcasts in virtually every vehicle.

Reading that pamphlet now, "DAB at NAB '91," makes one think sorrowfully about what might have been. NAB saw satellite radio coming, and understood that a new terrestrial DAB service that complemented the satellites was a strong possibility. Here we are almost 15 years later and two satellite radio systems have been launched and are well on their way to profitability, and one of these satellite operators has just purchased a huge block of the complementary local radio licenses that, were it not for that wealthy broadcaster revolt in 1991, could have been AM and FM broadcasters' future. More on what the future now looks like for AM and FM broadcasters later. First let's look back at the future that NAB saw in 1991.

In "DAB at NAB '91" NAB accurately described the new competitive threats that were looming on radio's horizon. The opening paragraph described digital audio broadcasting as,

> ".. the transmission of radio programming using digital technologies. DAB transmission can be direct to listeners from a satellite or transmitted terrestrially, like AM and FM broadcasts. DAB has many supporters around the world and it is expected that digital broadcasting from satellites will begin in some countries by the mid-1990s …"[2]

XM Satellite Radio and Sirius Satellite Radio were licensed in the mid-1990s, and began commercial service in 2001 and 2002, respectively. In "DAB at NAB '91" NAB went on to say,

> "If the United States does not establish a standard for terrestrial DAB in the near future, DAB via satellites will begin anyway. Without a terrestrial DAB system entering the marketplace, satellite DAB broadcasters will have a marketplace advantage."[3]

It also said,

> "… if the radio industry decides to await the development of other DAB systems, then test and evaluate them, we could face a delay of several years. During that time, we would be broadcasting analog signals while satellite operators, cable systems, CDs and DAT will be providing digital signals to consumers. That would put radio – both AM and FM – in the position of being an inferior service that has to play catch-up to its competitors."[4]

Has anyone noticed the inferior song title/artist displays that FM broadcasters have on some radios in their game of catch-up with satellite radio and iPods? Has anyone noticed AM broadcasters' total lack of any similar display? The game of catch-up is well underway.

In "DAB at NAB '91" NAB even noted that "the band above 2,300 MHz (known as 'S band')" might "be used for terrestrial DAB in the United States."[5] Ultimately, of

course, this is what happened. Both the nationwide satellite digital radio services and the local frequencies that XM Satellite Radio recently purchased were allocated in a contiguous block of spectrum in the S band.[6]

Despite all of this guidance from NAB, wealthy broadcasters rose up in revolt, denouncing NAB's proposed strategy to acquire new spectrum for digital radio in the United States. The man who led this revolt was Randy Odeneal of Sconnix Broadcasting. He was a wealthy, big market FM broadcaster who didn't want to see stations with lesser quality signals suddenly acquire digital signals that would enable them to more effectively compete with him. He led other like-minded wealthy broadcasters in a revolt within the NAB, and essentially told the association to stop trying to make it easier for stations with lesser quality signals to compete with stations that had the best signals. From this concept, the idea of IBOC digital radio was born. So, to those commenters who are so concerned about the damage that IBOC might do to the AM band, please understand this was the whole plan from the beginning. The whole point of IBOC digital radio from the beginning has been to enable all radio broadcasters to convert to digital while still ensuring that the high powered FM stations have a tremendous market advantage.

Many people have complained about the interference that IBOC will cause in the AM band but few seem to have caught on to the fact that the IBOC standard lets FM broadcasters double, triple, and maybe even quadruple their program offerings, but it keeps AM broadcasters restricted to a single offering. This is exactly the kind of market advantage that the wealthy FM broadcasters wanted from digital back in 1991.

Because of Randy Odeneal and his wealthy radio broadcasting friends,[7] the NAB was forced to abandon its efforts to secure terrestrial broadcasters a place in the new digital radio broadcasting band that the FCC was considering. Ultimately, after considering many comments on the new digital radio broadcasting band over several years, the FCC allocated spectrum from 2310.0-2360.0 MHz for this purpose.[8] The band 2320.0-2332.5 MHz was allocated for one satellite radio service, 2332.5-2345 MHz for another, and 2310-2320 and 2345-2360 MHz were allocated for local satellite radio use, or other terrestrial mobile or fixed uses. Of course, XM Satellite Radio and Sirius Satellite Radio are now operating in the two satellite blocks. XM, by far the leader of the two, recently announced that it is purchasing many of the licenses for the local satellite block, giving it local signals in 15 of the top 20 markets.[9] Had it not been for the 1991 wealthy broadcaster revolt, current AM and FM broadcasters would likely have local radio licenses in that spectrum today.

Now, back to why the wealthy broadcaster revolt, and the resulting insistence that broadcasters put digital signals in their analog spectrum, will likely result in the demise of most of today's terrestrial broadcasters. It's ironic, but the myopic efforts of high powered FM broadcasters to ensure that the digital transition wouldn't provide too much improvement to their competitors with lesser signals is likely going to come back to haunt them. Auto manufacturers have formed alliances with the satellite broadcasters, and in several instances even have ownership stakes in the satellite industry.[10] As the

satellite services become more established, and particularly if XM successfully uses its new local satellite licenses to provide even better localized content, there will clearly be a strong incentive for automakers to consider dropping AM/FM receivers from the standard equipment inventories for their vehicles. All businesses are always looking to control costs, and if a single 2.5 GHz receiver system can be used to receive national and local broadcasts, why should the automaker waste money by also installing AM/FM receivers and antennas as standard equipment? Of course, they won't stop installing AM/FM receivers right away, but when it does happen it will happen quickly. For those of you who think AM/FM radio is too much of an institution to be wiped out look at what's happening to the wired telephone line business. Cable modems and wireless phones have made that fixture in American households useless for many people, and these lines are being abandoned at a rapidly accelerating pace. I'm sure AM and FM radio won't go away completely, but these local signals will likely be used for more niche services as the mass market audience dwindles.

Isn't it funny that a secondary complaint that a number of broadcasters had about NAB's 1991 proposed strategy for putting digital radio in a new band was that NAB planned to acquire the U.S. license for the Eureka 147 technology, and in turn license the use of this technology to AM and FM broadcasters in this country. In its pamphlet NAB justified its plan by saying,

> "NAB will derive no financial benefit from the licensing. Any royalties will go to NAB's for-profit subsidiary, NAB Technologies, Inc., whose earnings are earmarked to help fund and develop emerging broadcast technologies. NAB Technologies, Inc. is self-supporting and does not draw upon member dues or other NAB funds. Thus, it is geared to seizing just such opportunities as DAB without diverting vital funds from other NAB member services and activities. NAB Technologies, Inc. will relinquish part or all of its interest in the U.S. license for Eureka 147/DAB to American broadcasters and others who wish to invest in it."[11]

When they learned of NAB's plan many broadcasters objected to the idea of paying licensing fees for their transmission equipment. Of course, now, they're paying iBiquity instead. How ironic.

In the end, that 1991 wealthy broadcaster revolt caused AM and FM broadcasters to miss out on a move to S band spectrum next to XM and Sirius. It caused AM and FM broadcasters to fall way behind satellite broadcasters in the rollout of digital audio broadcasting and its associated features like song title and artist information. It didn't save broadcasters any licensing fees as they now have to pay iBiquity instead. And, ultimately, it may have doomed the 535-1705 kHz and 88.1-107.9 MHz radio broadcasting services by making their receivers an inconvenient additional expense for automakers who are getting very positive customer feedback in response to their S band products.

I thoroughly enjoyed my time in radio broadcasting. In its heyday, local radio was terrific. But, as I said earlier, money talks, and the big money took over radio and is destroying it. For nearly 15 years the big money broadcasters have been fixated on protecting their investments against other AM/FM competitors and this has left the entire radio broadcasting industry ill-prepared to deal with the new competition from XM and Sirius. So, to all of you AM broadcasters and listeners who are unhappy with IBOC digital radio, for your own happiness please just accept the fact that money talks, and there isn't enough of it in AM broadcasting for that part of the industry to be heard within the NAB, let alone the FCC. Enjoy the rest of your time in radio while you can, and just hope that your next door neighbor on the dial doesn't start jamming you with an IBOC signal.

Thank you for the opportunity to comment.

Jack Taylor

Notes:

[1] "XM Satellite Radio To Acquire WCS Wireless," XM Satellite Radio press release, July 13, 2005.

[2] National Association of Broadcasters, "DAB at NAB '91," 1991, page 2. It's worth noting that XM Satellite Radio has strong ties to Worldspace, a provider of digital satellite radio broadcasts in other parts of the world. "XM Satellite Radio Announces Strategic Investment in Worldspace," XM Satellite Radio press release, July 19, 2005.

[3] National Association of Broadcasters, "DAB at NAB '91," 1991, page 7.

[4] National Association of Broadcasters, "DAB at NAB '91," 1991, page 7.

[5] National Association of Broadcasters, "DAB at NAB '91," 1991, page 9.

[6] FCC Rules Section 2.106.

[7] Page 19 of the "DAB at NAB '91" pamphlet lists the members of NAB's DAB Task Force from back then as Alan Box, EZ Communications (Chairman); Michael Faherty, Cox Broadcasting; Robert Fox, KVEN/KHAY, Ventura, CA; David Gingold, Barnstable Broadcasting; Scott Ginsburg, Evergreen Media Corp.; Dean Goodman, WLVE, Miami; Gary Grossman, KRKT AM-FM, Albany, OR; Walter May, WPKE/WDHR, Pikeville, KY; Don Newburg, WGOW/WSKZ, Chattanooga; Randy Odeneal, Sconnix Broadcasting; Michael Osterhout, Edens Broadcasting; and Wayne Vriesman, Tribune Broadcasting. After NAB '91 Randy Odeneal became chair of NAB's DAB Task Force. How many of these guys have now cashed out realizing that their stations' values had peaked due to their short term thinking?

[8] *Report and Order Memorandum Opinion and Order and Further Notice of Proposed Rule Making,* IB Docket 95-91, Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz frequency band, March 3, 1997, and *Report and Order,* GN Docket 96-228, Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS").

[9] "XM Satellite Radio To Acquire WCS Wireless," XM Satellite Radio press release, July 13, 2005.

[10] General Motors and Honda, for example, are part owners of XM Satellite Radio and have seats on XM's board.

[11] National Association of Broadcasters, "DAB at NAB '91," 1991, page 13.